

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of identifying a cell colony which expresses a soluble variant of a target protein, which method comprises:

(a) subjecting said cell colony to conditions which are capable of causing non-denaturing lysis thereof, wherein said lysis is carried out chemically, by freeze-thawing colonies or a combination thereof, and wherein said cell colony is not grown in liquid culture;

(b) filtering the lysate of step (a) through a filter having pores which allow only soluble proteins to pass through the filter; and

(c) detecting target protein which has passed through the filter, wherein the target protein is not detected on the basis of its own enzymatic activity.

2. (Canceled)

3. (Currently amended) The method of claim 2 wherein native lysis is carried out by freeze thawing colonies.

4. (Currently amended) The method of claim 2 or 3 wherein native lysis is carried out using a native lysis buffer.

5. (Previously amended) The method of claim 1, wherein the target protein is fused to a protein or polypeptide tag.

6. (Previously amended) The method of claim 1, wherein soluble proteins in the filtrate are identified using antibodies and/or fusion tags.

7. (Original) The method of claim 5 or 6 wherein the fusion tag is His.

8. (Previously amended) The method of claim 5, wherein the tag acts as the substrate in an enzymatic detection method for detecting the target protein in step (c) of claim 1.

9. (Previously amended) The method of claim 1, wherein step (c) is a non-enzymatic detection method.

10. (Previously amended) The method of claim 1, wherein said filter has a pore size between 0.1 and 1.5 μm .

11. (Previously amended) The method of claim 1, wherein said colony is lifted from its growth media on the filter used in step (b).

12. (Original) The method of claim 11, wherein said colonies are lifted prior to the lysis of step (a).

13. (Previously amended) The method of claim 1, wherein filtration step (b) includes the application of a force to the filter carrying the colonies.

14. (Previously amended) The method of claim 1, wherein proteins in the filtrate from filtration step (b) are captured on a solid support prior to detection step (c).

15. (Previously amended) The method of claim 1, wherein said protein is a membrane protein.

16. (Withdrawn) A method of identifying a cell colony expressing a soluble variant of a membrane protein, which method comprises:

(a) subjecting one or more colonies of cells to conditions which are capable of causing lysis thereof;

(b) filtering the lysate of step (a) through a filter having pores which allow only soluble proteins to pass through the filter, thereby generating a filtrate containing soluble membrane proteins.

17. (Withdrawn) A kit for use in the methods of any one of claims 1 to 15 comprising:

- (a) a filter having pore sizes which only allow soluble proteins to pass through the filter;
- (b) said support; and optionally
- (c) reagents for use in native lysis of the cell colonies.